WHAT IS CLAIMED IS:

1. An image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoder comprising:

an electric power supplying means for supplying an electric power to respective units of the image decoder;

a decoding means for sequentially decoding each image data of the encoded motion picture data;

a displaying means for sequentially displaying each image data of the decoded motion picture data; and

a controlling means for controlling a decoding process in the decoding means on the basis of anticipated energy to be required for playing the motion picture data and remaining energy of the electric power supplying means to dynamically control the playing quality of the motion picture data.

2. The image decoder according to claim 1, further comprising a load monitoring means for monitoring the computational load of the decoding means, wherein the load monitoring means adjusts the CPU frequency of the decoding means in accordance with the computational load corresponding to the playing quality.

3. The image decoder according to claim 1, wherein the playing quality indicates the number of frames to be played during a unit time or the number of

bits for one pixel of each image data.

4. An image decoding method of an image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoding method comprising:

a decoding step for sequentially decoding each image data of the encoded motion picture data;

a displaying step for sequentially displaying each image data of the decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step on the basis of anticipated energy to be required for playing the motion picture data and remaining energy of an electric power supplying means for supplying electric power to respective units of the image decoder to dynamically control the playing quality of the motion picture data.

5. The image decoding method according to claim 4, wherein the image decoder includes a load monitoring means for monitoring a computational load in the decoding step, the image decoding method further comprising a CPU frequency adjusting step for adjusting a CPU frequency in the decoding step in accordance with the computational load corresponding to the playing quality by the load monitoring means.

6. The image decoding method according to claim 4, wherein the playing quality indicates the number of frames to be played during a unit time or the

number of bits for one pixel of each image data.

7. A program for executing an image decoding process in an image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the program comprising:

a decoding step for sequentially decoding each image data of the encoded motion picture data;

a displaying step for sequentially displaying each image data of the decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step on the basis of anticipated energy to be required for playing the motion picture data and remaining energy of an electric power supplying means for supplying electric power to respective units of the image decoder to dynamically control the playing quality of the motion picture data.

8. An image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoder comprising:

a decoding means for sequentially decoding each image data of the encoded motion picture data;

a displaying means for sequentially displaying each image data of the decoded motion picture data; and

a controlling means for controlling a decoding process in the decoding means to dynamically control the playing quality of the motion picture data,

wherein in case the current CPU frequency of the decoding means is higher than a first CPU frequency necessary for displaying a predetermined number of frames during a unit time, the controlling means dynamically controls the playing quality of the motion picture data correspondingly to the remainder of the CPU frequency.

9. The image decoder according to claim 8, in case the current CPU frequency of the decoding means is higher than the first CPU frequency, the controlling means changes the CPU frequency of the decoding means to a second CPU frequency that is lowest among changeable operating frequencies which are not lower than the first CPU frequency and dynamically controls the playing quality of the motion picture data in accordance with the difference between the first CPU frequency and the second CPU frequency.

10. The image decoder according to claim 8, wherein the playing quality indicates the number of frames to be played during a unit time or the number of bits for one pixel of each image data.

11. An image decoding method of an image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoding method comprising:

a decoding step for sequentially decoding each image data of the encoded

motion picture data;

a displaying step for sequentially displaying each image data of the decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step to dynamically control the playing quality of the motion picture data,

wherein in case the current CPU frequency of the decoding step is higher than a first CPU frequency necessary for displaying a predetermined number of frames during a unit time, the controlling step dynamically controls the playing quality of the motion picture data correspondingly to the remainder of the CPU frequency.

12. The image decoding method according to claim 11, in case the current CPU frequency of the decoding step is higher than the first CPU frequency, the controlling step changes the CPU frequency of the decoding step to a second CPU frequency that is lowest among changeable operating frequencies which are not lower than the first CPU frequency and dynamically controls the playing quality of the motion picture data in accordance with the difference between the first CPU frequency and the second CPU frequency.

13. The image decoding method according to claim 11, wherein the playing quality indicates the number of frames to be played during a unit time or the number of bits for one pixel of each image data.

14. A program for executing an image decoding process in an image decoder

for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the program comprising:

a decoding step for sequentially decoding each image data of the encoded motion picture data;

a displaying step for sequentially displaying each image data of the decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step to dynamically control the playing quality of the motion picture data,

wherein in case the current CPU frequency of the decoding step is higher than a first CPU frequency necessary for displaying a predetermined number of frames during a unit time, the controlling step dynamically controls the playing quality of the motion picture data correspondingly to the remainder of the CPU frequency.

15. An image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoder comprising:

a decoding means for sequentially decoding each image data of the encoded motion picture data;

a displaying means for sequentially displaying each image data of the decoded motion picture data; and

a controlling means for controlling a decoding process in the decoding means to dynamically control the playing quality of the motion picture data,

wherein the controlling means dynamically controls the playing quality of the motion picture data on the basis of a unit time during which a predetermined number of frames is to be displayed, a time required for displaying the predetermined number of frames, or an anticipated time to be required for displaying the predetermined number of frames.

16. The image decoder according to claim 15, wherein the controlling means anticipates the time to be required for displaying the predetermined number of frames on the basis of the number of frames that can be displayed during the unit time.

17. The image decoder according to claim 15, wherein the playing quality indicates the number of frames to be played during the unit time or the number of bits for one pixel of each image data.

18. An image decoding method of an image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the image decoding method comprising:

a decoding step for sequentially decoding each image data of the encoded motion picture data;

a displaying step for sequentially displaying each image data of the decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step to dynamically control the playing quality of the motion picture data,

wherein the controlling step dynamically controls the playing quality of the motion picture data on the basis of a unit time during which a predetermined number of frames is to be displayed, a time required for displaying the predetermined number of frames, or an anticipated time to be required for displaying the predetermined number of frames.

19. The image decoding method according to claim 18, wherein the controlling step anticipates the time to be required for displaying the predetermined number of frames on the basis of the number of frames that can be displayed during the unit time.

20. The image decoding method according to claim 18, wherein the playing quality indicates the number of frames to be played during the unit time or the number of bits for one pixel of each image data.

21. A program for executing an image decoding process in an image decoder for decoding encoded motion picture data composed of image data having a plurality of frames and displaying decoded motion picture data; the program comprising:

a decoding step for sequentially decoding each image data of the encoded motion picture data;

a displaying step for sequentially displaying each image data of the

decoded motion picture data on a displaying means; and

a controlling step for controlling a decoding process in the decoding step to dynamically control the playing quality of the motion picture data,

wherein the controlling step dynamically controls the playing quality of the motion picture data on the basis of a unit time during which a predetermined number of frames is to be displayed, a time required for displaying the predetermined number of frames, or an anticipated time to be required for displaying the predetermined number of frames.